



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.                        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/646,975                             | 08/22/2003  | Patrick C. Lilley    | 14911US02           | 1060             |
| 23446                                  | 7590        | 01/03/2007           | EXAMINER            |                  |
| MCANDREWS HELD & MALLOY, LTD           |             |                      | WOOD, WILLIAM H     |                  |
| 500 WEST MADISON STREET                |             |                      |                     |                  |
| SUITE 3400                             |             |                      | ART UNIT            | PAPER NUMBER     |
| CHICAGO, IL 60661                      |             |                      |                     | 2193             |
| SHORTENED STATUTORY PERIOD OF RESPONSE |             | MAIL DATE            | DELIVERY MODE       |                  |
| 3 MONTHS                               |             | 01/03/2007           | PAPER               |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/646,975             | LILLEY, PATRICK C.  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | William H. Wood        | 2193                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 August 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-22 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 22 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/22/04; 10/12/04</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

Claims 1-22 are pending and have been examined.

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 22 January 2004 and 12 October 2004 were considered by the examiner. Cited document 8202626 was not found in the application.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is

determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e))..

3. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by **O'Neill** (USPN 6,832,373).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim 1

**O'Neill** disclosed a mobile services network comprising:

a mobile electronic device (*figure 1C, element 104; column 7, lines 23-29*);

a management server (*figure 1C, element 132*);

an update package repository (*figure 1C, element 133; column 10, lines 63-64*); and

a generator with a partial predictive mapping preprocessor (*figure 1C, element 102*).

Claim 2

**O'Neill** disclosed the network according to claim 1 wherein the generator with a partial predictive mapping preprocessor generates update packages by

comparing an old version and a new version of firmware (*figure 1A, elements 106 and 108; column 8, lines 7-8, 32-37*).

Claim 3

**O'Neill** disclosed the network according to claim 2 wherein the update packages are populated into the update package repository (*figure 1C, element 133; column 10, lines 63-64*).

Claim 4

**O'Neill** disclosed the network according to claim 2 wherein the generated update packages incorporate a shift region list (*column 4, lines 7-13*).

Claim 5

**O'Neill** disclosed the network according to claim 1 wherein the management server and the update package repository are communicatively coupled (*figure 1C*).

Claim 6

**O'Neill** disclosed the network according to claim 1 wherein the generator with a partial predictive mapping preprocessor and the update package repository are communicatively coupled (*figure 1C*).

Claim 7

**O'Neill** disclosed the network according to claim 1 wherein the generator with a partial predictive mapping preprocessor is located at a location remote from the update package repository (*figure 1C*).

Claim 8

**O'Neill** disclosed the network according to claim 1 wherein the mobile electronic device comprises:

- a non-volatile memory (*column 27, lines 56-59*);
- a random access memory (*column 16, line 4*); and
- security services (*column 7, lines 36-37*).

Claim 9

**O'Neill** disclosed the network according to claim 8 wherein the non-volatile memory (*figure 8B*) comprises:

- an update agent (*column 4, line 46; column 27, lines 56-59*);
- a firmware and real-time operating system (*column 33, line 33*);
- a download agent (*column 27, lines 56-59*); and
- a boot initialization (*column 28, line 2*).

Claim 10

**O'Neill** disclosed the network according to claim 9 wherein the non-volatile memory further comprises an operating system layer (*column 33, line 33*).

Claim 11

**O'Neill** disclosed the network according to claim 9 wherein the non-volatile memory further comprises an end-user-related data and content unit (*column 7, line 26*).

Claim 12

**O'Neill** disclosed the network according to claim 9 wherein the mobile electronic device performs the following:

downloading an update package from the update package repository (*column 16, lines 26-28*);

rebooting (*column 16, line 36*);

executing the boot initialization (*column 16, line 36; column 28, line 2*);

determining whether an update process is needed (*column 9, line 21*); and

invoking the update agent (*column 16, lines 37-39*).

Claim 13

**O'Neill** disclosed the network according to claim 12 wherein the mobile electronic device determines the need for an update process based on status information (*column 9, line 21*).

Claim 14

**O'Neill** disclosed the network according to claim 12 wherein the mobile electronic device invokes the update agent to execute the update process if it is determined an update process is needed (*column 16, lines 37-39*).

Claim 15

**O'Neill** disclosed a method for generating an update package using an old image and a new image of a firmware in a mobile services network, the method comprising:

creating a module map between modules in the old image and modules in the new image of firmware (*column 4, lines 3-13; column 10, lines 65-37*);

creating a module map between modules in the old image and modules in the new image of firmware (*column 4, lines 3-13*);

creating a shift region list (*column 4, lines 3-13*); and

generating an update package using information at least based on the shift region list (*column 4, lines 3-13*).

Claim 16

**O'Neill** disclosed the method according to claim 15 wherein the module map comprises module locations and sizes in the old image of firmware and the new image of firmware (*column 8, lines 33-37; column 19, lines 4-12, reuse and recycle specifically located and sized code/modules*).

Claim 17

**O'Neill** disclosed the method according to claim 15 wherein creating the shift region list comprises:

- identifying shift points within each module of the firmware, wherein the shift points define shift regions (*column 19, lines 30-41*);
- creating a first shift region list (*column 19, lines 30-41*);
- modifying the first shift region list to include external shifts (*column 19, line 63 to column 20, line 5, different sections of the memory or storage*); and
- creating a second shift region list (*column 19, lines 53-58*);

Claim 18

**O'Neill** disclosed the method according to claim 17 wherein the method further comprises consolidating adjacent shift regions having identical address adjustments (*column 20, lines 5-15*).

Claim 19

**O'Neill** disclosed the method according to claim 17 wherein the first shift regions list comprises:

shift regions correspond to modules in the old image of firmware (*column 19, line 6, "existing code version"*);

sizes of the shift regions (*column 19, lines 30-41*); and

adjustment values correspond to the difference between a start location of a module in the old image of firmware and the start location of the same module in the new image of firmware (*column 20, lines 60-64*).

Claim 20

**O'Neill** disclosed the method according to claim 19 wherein modifying the first shift region list comprises:

finding modules that changed size from the old image of firmware to the new image of firmware (*column 20, lines 36-41*);

adjusting address-based instructions in the old image of firmware using the adjustment value of the changed modules (*column 20, lines 36-41; column 20, lines 52-53*);

identifying areas where new content was inserted into a module (*column 24, lines 37-63, DEF instruction*);

defining the identified areas of new content as new shift regions (*column 24, lines 37-63, DEF instruction*);

deleting the changed modules from the first shift list (*column 24, lines 37-63, DEF instruction*); and

inserting the defined shift regions into the first shift list (*column 24, lines 37-63, DEF instruction; column 23, line 38 to column 24, line 36, HSH instruction*).

Claim 21

**O'Neill** disclosed the method according to claim 18 wherein adjacent shift regions are consolidated if modules remain unchanged in the new image from the old image (*column 20, lines 11-15*).

Claim 22

**O'Neill** disclosed the method according to claim 18 wherein the second shift region list is the result of consolidating shift regions in the modified first shift region list (*column 19, lines 53-58*).

**Correspondence Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (571)-272-3736. The examiner can normally be reached 10:00am - 4:00pm Monday thru Friday.

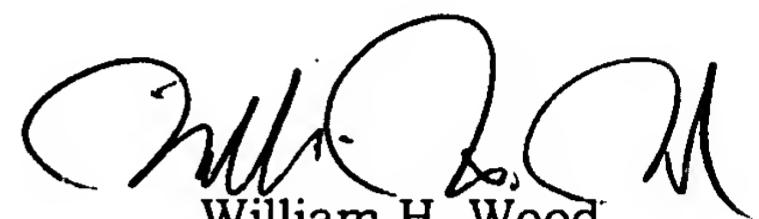
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)-272-3756. The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained form either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2193

systems, see <http://pair-direct.uspto.gov>. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



William H. Wood  
Patent Examiner  
AU 2193  
December 22, 2006